

University of Arkansas, Fayetteville

ScholarWorks@UARK

Arkansas Physics Times

Physics

8-17-2009

Arkansas Physics Times, August 17, 2009

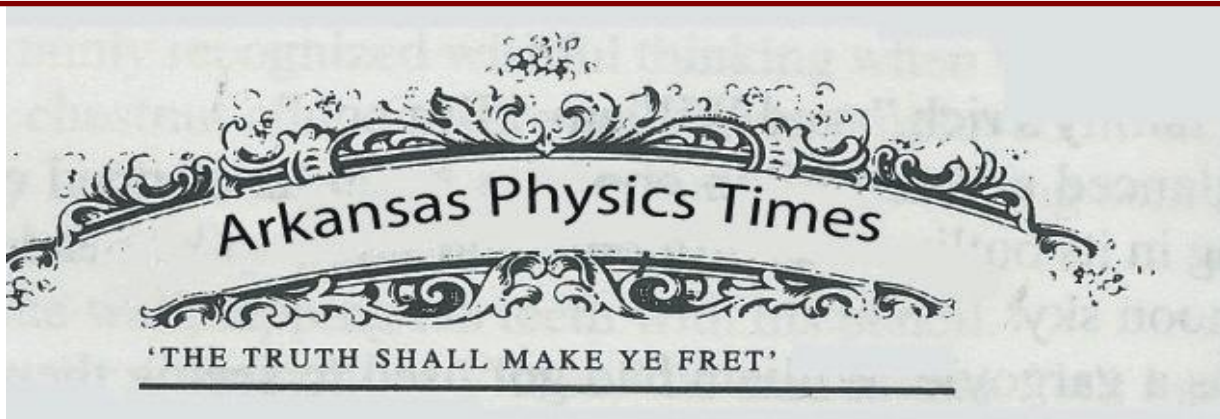
Society of Physics Students (American Institute of Physics)

Follow this and additional works at: <https://scholarworks.uark.edu/arkansas-physics-times>

Citation

Society of Physics Students (American Institute of Physics). (2009). Arkansas Physics Times, August 17, 2009. *Arkansas Physics Times*. (7) Retrieved from <https://scholarworks.uark.edu/arkansas-physics-times/7>

This Periodical is brought to you for free and open access by the Physics at ScholarWorks@UARK. It has been accepted for inclusion in Arkansas Physics Times by an authorized administrator of ScholarWorks@UARK. For more information, please contact ccmiddle@uark.edu.



2009 Elections Bring New Management and New Horizons to the University of Arkansas SPS

Graduation last May marked the departure of many SPS officers, including President, Secretary, Web Master, and Newspaper Editor. Though the graduates will be missed, the brilliant possibilities open to an entirely fresh executive committee are endless. Look for innovative ideas, endeavors, and outlooks for the year to come. Here are your new SPS officers:

President Rachel Lee



VP Holly Jackson



Secretary Zach Coats



Calendar of Events

- Sept. 15th 5:30pm
SPS Game Night
- Oct. 9th 4pm
Student Research Colloquium
- Oct. 13th 6:15pm
Second SPS Meeting!
- Oct. 23-24
INBRE Conference
- Nov. 1st 2-6pm
Haunted Lab 2009
- Nov. 10th 5:30pm
Third SPS Meeting!
- Every Day: Go to the library to enjoy snacks and coffee while supporting SPS!

Treasurer Nathan Willems Newspaper Editors: AJ Salois, Zach Henderson Newspaper Reporters: Aisha Mahmoud, Vikash Mishra



Nathan Willems Builds Departmental Tesla Coil

Nathan Willems constructed a working Tesla coil for use by the physics department. He demonstrated the device at the SPS Spring Fun Fair to delighted children. The device generates 12 inch sparks and



produces a lovely ozone smell and ultraviolet radiation. Care should be taken when demonstrating the coil since it steps up a 20,000V high-voltage transformer output. Nathan used a Plexiglas shield to protect his viewers. The device is still finicky and some tuning may be required before use.



First Annual Physics Fantastic Fun and Follies Fair Hosted by the University of Arkansas Society of Physics Students in Association with the American Society of Mechanical Engineers

Deliciously alliterated and even more delightfully executed, the first of many Physics Fantastic Fun and Follies Fairs took place on April 4th. This innovative move toward greater community involvement answers a need for more spring outreach events. In the past, the Society of Physics Students had been a participant in Fayetteville's Spring Fest. However, with the decline of that event, the SPS was left with no spring activity to mirror the highly successful Haunted Lab that occurs every fall. According to some parents interviewed at the Fair, such a spring event is desperately needed. In some cases, parents reported that they could not attend the Haunted Lab because of scheduling conflicts, whereas a spring Fair was much more accessible. For other parents, their aspiring physicists' desire for exciting demonstrations and liquid nitrogen ice cream could not be adequately satisfied with only one event per year. Whatever the reason, the Fair was an incredible success. The SPS fully expects it to grow and become a community staple, as the Haunted Lab has done in recent years. Thanks to all volunteers for making this a special day for kids and adults alike.

Fantastic Fun and Follies Fair Photo Gallery



Matt McKnight and Dr. Stewart Mingle



Rachel Lee Serves Delicious Liquid Nitrogen Ice Cream

Fantastic Fun and Follies Fair Photo Gallery Continued



Above: AJ Salois, Misti Sharp, and Shawn Ballard setting up before the fair

Below and right: Future physicists enjoying the demonstrations

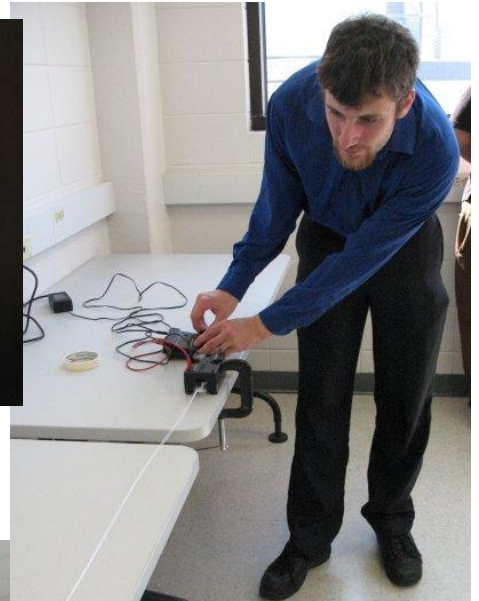


Left: Awaiting a Mentos and soda explosion
Right and below: Volunteers Matt McKnight, Nathan Willems, and Rachel Lee enjoying the explosion with excited visitors



(L) Matt McKnight showing the kids what not to do; (C) Volunteers AJ Salois, Misti Sharp, Holly Jackson, Shawn Ballard and Ashley Stewart; (R) Jon Conley the Popcorn Man

Fantastic Fun and Follies Fair Photo Gallery Continued: Volunteers showing the kids how it's done.



Above Left: Marshall Scott; Center: Nathan Willems; Right: Zach Henderson
Below Left: Rachel Lee; Center: Misti Sharp; Right: Chris Sharp



All this and fabulous prizes
to go with your liquid nitrogen
ice cream!



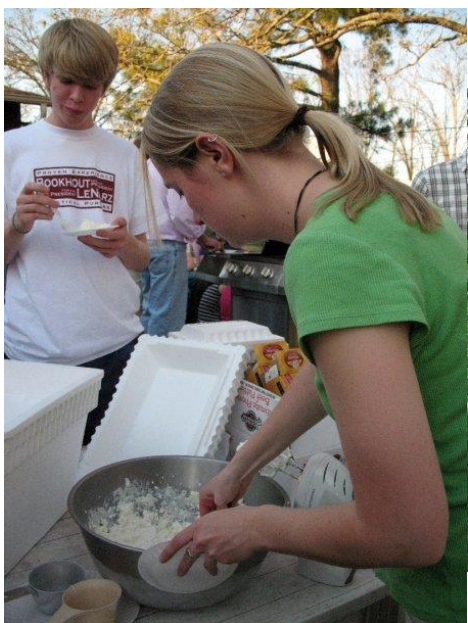
Above: Electronics Kit to be given away to a very lucky future physicist! Right: Holly Jackson and AJ Salois cool off with some liquid nitrogen ice cream.

Annual SPS Year-End Picnic

The 2009 SPS end-of-the-year picnic was a fantastic success as always. Thanks to Professors John and Gay Stewart for hosting the event again this year. Of particular enjoyment this year were the liquid nitrogen experiments and the Peep jousting. Further microwaving endeavors were less than stellar. Better luck next time.



Left: Playing basketball after dinner. Right: Delicious grilled dinner. Below: Relaxing!



Liquid nitrogen and soapy water

Above: Super cold fun!

Holly making liquid nitrogen ice cream.

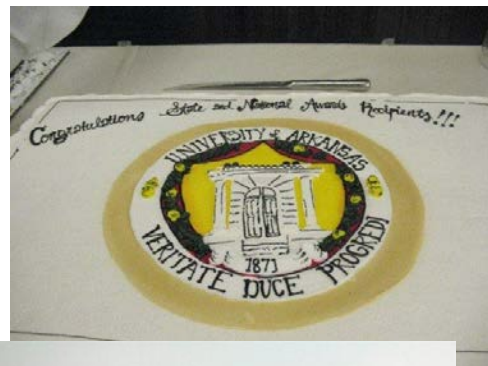


Left and above: Peep jousting and the nasty aftermath.

Left: Kyle, Will, Josiah, Shawn and Chris intensely watch the Peeps joust.

PHYSICS STUDENTS RECOGNIZED AT STATE AND NATIONAL AWARDS CEREMONY

Physics students received prestigious national awards and high honors. Josiah Walton and Tyler House were awarded a National Science Foundation graduate fellowship. Rachel Lee and Matt Naglak won Goldwater Scholarships with Colin Paul receiving an honorable mention. This performance on the Goldwater with only four awarded per state is the best ever for a department our size. Scott Steele won a scholarship to medical school. Christine Nicholson and Tiffany Redding both won PhysTEC Noyce Scholarships for Future Physics Teachers. State Undergraduate Research Fellowship (SURF) winners included Adam Barito, Colin Paul, Josiah Walton, and Rachel Lee. In addition, Adam Barito, AJ Salois, Colin Paul, Joseph Snow, Kristin Watson, Marshall Scott, and Zach Coats were all recognized for their participation in National Science Foundation Research Experiences for Undergraduates. Excellent work!



Sigma Pi Sigma Induction

Sigma Pi Sigma is the national physics honors society. The department has had a Sigma Pi Sigma chapter since 1946. For most of the department's history, successful students, graduate students, and faculty have been inducted each spring into this prestigious organization. For reasons that are not clear, inductions ceased in 1998. This year the physics department renewed this tradition and inducted 13 new members. Membership in Sigma Pi Sigma celebrates both scholarship and service and the new members

are not only excellent students but also give of their time to the department and the community.



- (Bottom row) Ashley Stewart, Rachel Lee, August Clark, Shawn Ballard, and Chris Sharp
- (Top row) Titus Morris, Scotty Bobbit, Colin Paul, Matt Naglak (eyes closed), and Josiah Walton
- (Not shown) Adam Barito, Elaine Christman, and Jason Lee (deceased).

CONGRATULATIONS GRADUATES!



We said goodbye (but they will keep in touch) to a lot of old friends this year. Shawn Ballard turns over her editing duties and returns to my graduate school, the University of Illinois, to study English. Josiah Walton will also be attending Illinois, in physics. August Clark and Scott Steele will be attending medical school at UAMS. Jonathon Gardner will be attending graduate school in physics at the University of California – Santa Barbara. Amanda Schilling will join the SPAC graduate program at the U of A. Chris Sharp, Jeff O’Connell, Shawn Nichols, Andrew Winstead, and Shane Carey will pursue a Masters of Arts in Teaching at the University of Arkansas with Noyce Scholarships. Mike Hinds will seek a masters degree in computer science at the U of A. Michael Buscher will seek a masters degree in electrical engineering at the U of A. Aaron French was commissioned in the Air Force and Stephen Baccus will seek to join the navy nuclear power program. Titus Morris will attend graduate school in physics

at the U of A. Brandon Renuard will attend graduate school in genetics at Baylor. Ashley Stewart will take a year to complete papers derived from her honors research. David Lachut will pursue a masters degree in computer science at the U of A. Brad Miller is working at a local learning technology company.



Shawn Ballard, Josiah Walton, and August Clark received Summa Cum Laude honors with Shawn also receiving Summa honors in English. Scott Steele and Amanda Schilling were awarded Magna Cum Laude honors. Aaron French and Ashley Stewart received Cum Laude honors. The picture below shows some of the awardees with their advisers at the honors reception. From left to right: Dr. Gay Stewart, Aaron French, August Clark, Dr. Lin Oliver, Scott Steele, Josiah Walton, Dr. Julia Kennefick, Shawn Ballard, and Dr. John Stewart.



GIANT Sudoku

Called "The Scottish Play" by superstitious actors, Shakespeare's play MACBETH is a harrowing study of ambition. The real Macbeth was king of the Scots from 1040 to 1057 and is buried on the island of Iona.

Can you solve our Giant Sudoku? Every row, every column, and every 4x4 box must contain digits 1 to 9, and all seven letters in the word MACBETH.

© The Puzzle Company

		2	E	7	6		8	M			T	3			9
6	T				B	4	A			9					
			8					4					6	M	H
4	C	7					H	6	8	B	2				
9	M			3		8	C	1			B	H	T	7	4
		8	C		E		6	A		H		2		1	5
H	6				A				7		8		M		
		3								M	9				
A		6	4	C	8			H	B		E	5			M
		M	H				T	7	6		1	8			
		5	7			6			4			1	A		T
1			T			M				8		C	2	4	
	2			5		B	4	3	E	1			8	T	
E	4				H						7	6		C	B
					1		3		M	5			H		E
3		T				E	2	C		4	6	M	1	5	A

Good luck!

OFFICER CONTACT INFORMATION

President: **Rachel Lee**

Email: rml02@uark.edu

Vice President: **Holly Jackson**

Email: hejacks@uark.edu

Treasurer: **Nathan Willems**

Email: nmwillem@uark.edu

Secretary: **Zach Coats**

Email: zcoats@uark.edu

Activities Coordinator: **Matt Naglak**

Email: mnaglak@uark.edu

Newspaper Editor: **AJ Salois**

Email: asalois@uark.edu

Newspaper Editor: **Zach Henderson**

Email: zhenders@uark.edu

Newspaper Reporter: **Aisha Mahmoud**

Email: axm029@uark.edu

Newspaper Reporter: **Vikash Mishra**

Email: vmishra@uark.edu